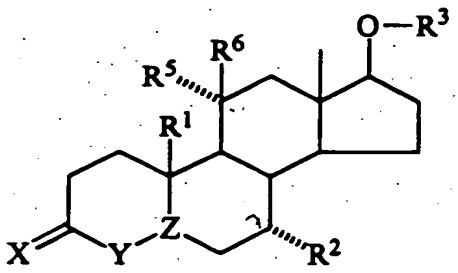
WHAT IS CLAIMED AS NEW AND IS DESIRED TO BE SECURED BY LETTERS PATENT OF THE UNITED STATES IS:

1. An androgenic steroid compound of the formula (I):



(I)

wherein:

R^1 is H or lower alkyl;

Y-Z is CH=C or CH_2-CH, wherein H is α to the rings; or Y-CH, wherein H is α to the rings and Y is S, O, or NR^{10}, wherein R^{10} is H or lower alkyl;

R^2 is an α-substituent which is unsubstituted lower alkyl or fluoro-substituted lower alkyl;

R^3 is C_1-C_8 alkyl, or C_2-C_8 alkenyl or alkynyl which are optionally substituted; or R^3 is C_4-C_8 cycloalkyl which is unsubstituted or substituted; or R^3 is C_6-C_{18} aryl which is unsubstituted or substituted; or R^3 is a 5- to 15-membered heterocycle which is unsubstituted or substituted, and further wherein any of the above may be further substituted with 1 to 3 heteroatoms or 1 to 5 halogen atoms or both; or

R^3 is H or acyl group (CO)-R^4, wherein R^4 is C_1-C_{18} alkyl, or C_2-C_{18} alkenyl or C_2-C_{18} alkynyl which are optionally substituted; or R^4 is C_4-C_{18} cycloalkyl or substituted cycloalkyl; or R^4 is C_6-C_{18} aryl or substituted aryl; or R^4 is a 5- to 15-membered heterocycle or substituted heterocycle, and wherein R^4 may be optionally substituted with 1 to 3 heteroatoms or 1 to 5 halogen atoms or both;

R^5 is α-H, and R^6 is β-lower alkyl, alkenyl or alkynyl which are optionally substituted, or R^5R^6 is $=CH_2$; and

X is O, H_2, (H, OH) or (H, $OCOR^4$), wherein R^4 is as defined above; or X is (H, OR^3), wherein R^3 is as defined above; or X is NOR^7, wherein R^7 is H or C_1-C_8 alkyl, or C_2-C_8 alkenyl or alkynyl which are optionally substituted; or R^7 is C_4-C_8 cycloalkyl which is unsubstituted or substituted; or R^7 is C_6-C_{18} aryl or substituted aryl; or R^7 is a 5- to 15-membered heterocycle which is unsubstituted or substituted, and R^7 may be optionally substituted with 1 to 3 heteroatoms or 1 to 5 halogen atoms or both; or X is (OR^8, OR^9), where R^8 and R^9 are lower alkyl, or (OR^8, OR^9) is a cyclic structure containing 2 to 3 carbon atoms, optionally substituted with lower alkyl, or 1 or 2 heteroatoms or halogens.

2. The androgenic steroid compound of Claim 1, wherein R^1 is H;

R^2 is CH_3;

R^3 is H, or R^3 is (CO)-R^4, wherein R^4 is CH_3, C_2H_5, n-C_6H_{13}, $(CH_3)_2CH$, cyclopentyl-CH_2-CH_2, trans-(4-n-butyl)cyclohexyl, n-C_9H_{19}, $(CH_2)_2(CO)(CH_2)_5CH_3$, phenyl-CH_2 or 3-pyridyl;

R^5 is α-H and R^6 is β-CH_3.

3. The androgenic steroid compound of Claim 2, wherein X is O.

4. The androgenic steroid compound of Claim 2, wherein X is NOH.

5. The androgenic steroid compound of Claim 2, wherein X is $NOCH_3$.

6. The androgenic steroid compound of Claim 1, which is selected from the group consisting of 7α,11β-dimethyl-17β-hydroxyestr-4-en-3-one, 17β-hydroxy-7α-methyl-11-methyleneestr-4-en-3-one, 7α,11β-dimethyl-17β-heptanoyloxyestr-4-en-3-one, 7α,11β-dimethyl-17β-[[(2-cyclopentylethyl)carbonyl]oxy]estr-4-en-3-one, 7α,11β-dimethyl-17β-

(phenylacetyloxy)estr-4-en-3-one, 7α,11β-dimethyl-17β-[[(trans-4-[n-butyl]cyclohexyl]carbonyl]oxy]estr-4-en-3-one, and 7α,11β-dimethyl-17β-hydroxy-5α-estran-3-one.

7. The androgenic steroid compound of Claim 1, wherein:

R^1 is H;

Y-Z is CH=C;

R^2 is α-CH_3;

R^3 is H;

R^5 is α-H;

R^6 is β-CH_3; and

X is O.

8. A pharmaceutical composition, which comprises

a) at least one compound of the formula (I) of Claim 1; and

b) a pharmaceutically-acceptable carrier.

9. The pharmaceutical composition of Claim 8, which further comprises at least one other pharmacologically active compound.

10. The pharmaceutical composition of Claim 9, wherein said other pharmacologically active compound is selected from the group consisting of progestins and GnRH analogs.

11. The pharmaceutical composition of Claims 8, 9 or 10 which is in a form suitable for injection.

12. The pharmaceutical composition of Claims 8, 9 or 10, which is in a form suitable for oral administration.

13. The pharmaceutical composition of Claims 8, 9 or 10, which is in a form suitable for inhalation.

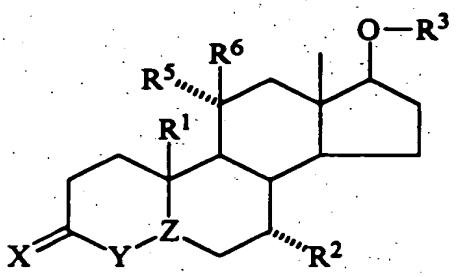
14. The pharmaceutical composition of Claims 8, 9 or 10, which is in a form suitable for dermal administration.

15. The pharmaceutical composition of Claims 8, 9 or 10, which is in a form suitable for buccal administration.

16. The pharmaceutical composition of Claims 8, 9 or 10, which is in form of a skin patch.

17. The pharmaceutical composition of Claims 8, 9 or 10, which is in a form suitable for intramuscular administration.

18. A method of making a compound of the formula (I):



(I)

which comprises:

a) introducing a 6,7-double bond into adrenosterone;

b) effecting 1,6-addition of a methyl group by reaction with an organometallic reagent, followed by acid treatment;

c) introducing a 1,2-double bond;

d) protecting the 17-ketone functionality;

e) reducing the 11-ketone group to an 11-hydroxy group;

f) aromatizing the A-ring to a phenol;

g) alkylating the phenol ring to an alkoxy arene compound;

h) oxidizing the 11-hydroxyl to an 11-ketone;

i) converting the 11-ketone to 11-methylene;

j) removing the protecting group at C-17 to yield the ketone;

k) reducing the 11-methylene to 11β-methyl;

l) reducing the 17-ketone to 17β-hydroxyl; and

m) converting the 3-alkoxy arene to a 4-en-3-one compound.

19. The method of Claim 18, wherein step a) is effected by an electronegatively-substituted quinone.

20. The method of Claim 18, wherein step b) is effected by a methyllithium copper complex.

21. The method of Claim 18, wherein step c) is effected by an electronegatively-substituted quinone.

22. The method of Claim 18, wherein step d) is effected by ketal formation with a 1,2- or 1,3-diol.

23. The method of Claim 18, wherein step e) is effected by a complex metal hydride reagent.

24. The method of Claim 18, wherein step f) is effected by a metal/arene mixture.

25. The method of Claim 18, wherein step g) is effected by either an alkyl halide or an activated alkyl ester in the presence of a base.

26. The method of Claim 18, wherein step h) is effected by a chromium oxidant.

27. The method of Claim 18, wherein step i) and j) are effected by a trialkyl silylmethyl organometallic reagent followed by treatment with an acid.

28. The method of Claim 18, wherein step k) is effected by metal-catalyzed hydrogenation.

29. The method of Claim 18, wherein step l) is effected by a complex metal hydride reagent.

30. The method of Claim 18, wherein step m) is effected by a dissolving metal in an amine solvent followed by acid treatment.

31. A method of making a compound of the formula (I) of Claim 1, which consists essentially of introducing a 7α-substituent prior to introducing an 11- substitutent.

32. The method of Claim 31, which commences from adrenosterone.

33. A subdermal implant for a mammal, comprising at least one or more compounds of Claim 1.

34. A patch for adhesion to a skin surface of a mammal, which comprises at least one or more compounds of Claim 1.

35. Containing means, comprising therein at least one or more compounds of Claim 1 in aerosol form suitable for inhalation.

36. The containing means of Claim 35, which is a metallic or plastic container, comprising spraying means for releasing said aerosol therefrom.

37. A method of effecting hormonal treatment in a mammal, which comprises administering an effective amount of one or more androgenic steroid compounds of Claim 1 to a mammal in need thereof.

38. The method of Claim 37, wherein said mammal is a human.

39. The method of Claim 37, wherein said mammal is a horse, cow, pig, sheep, ox or dog.

40. A method of controlling male fertility in a mammal, which comprises administrating an effective amount of one or more androgenic steroid compounds of Claim 1 to a mammal in need thereof.

41. The method of Claim 40, wherein said mammal is a human.

42. The method or Claim 40, wherein said mammal is a horse, cow, pig, sheep, ox or dog.

43. The method of Claim 40, which further comprises administering one or more other reproductively active compounds before, with or after administration of said one or more androgenic steroid compounds.